

REMARKS

Claims 1, 2, 4-8, 10-12, and 14-15 are pending. Claims 1 and 6 have been amended for clarification purposes only. Support for the amendments can be found in the Specification as filed at least on page 3, line 19 - page 4, line 14; page 6, lines 1-10; page 7, lines 11-20; page 8, lines 12-16; page 10, lines 12-22; and FIGS. 1-5. Claims 2, 10, and 14-15 have been canceled. No new matter has been added. The rejections of the claims are respectfully traversed in light of the amendments and following remarks, and reconsideration is requested.

Rejection Under 35 U.S.C. § 112

Claims 1-2, 4-8, 10-12, and 15 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, the Examiner writes in part:

In claim 1, lines 2-5, it is not clear what part of the invention is the portion to be deformed and which part is the separate member Also, it is not clear how any disclosed deformable portion of the invention allows for control of deceleration of the vehicle room.

Claim 6, lines 2-3 recite the rigid body supported on a deformable portion of the vehicle body, wherein the rigid body is attached to a member for transmitting a collision load to allow the rigid body to be capable of backward movement. From this recitation it is not clear what part of the disclosed invention is the deformable portion on which the rigid body is supported and which part is the member to which the rigid body is attached (this appears to be a double inclusion of the same part of the invention in the claim).

Amended Claim 1 recites "a vehicle body including a portion to be deformed on receiving a collision load and a separate member for transmitting said collision load, said portion being formed at least in front of a vehicle room wherein the separate member is deformable after said portion is deformed to thereby allow for control over deceleration of said vehicle room on receiving said collision load" and "an engine made of a rigid body supported on said vehicle body, wherein said engine is attached to said separate member so as to be movable together backward relative to said vehicle body on receiving said collision load."

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Amended Claim 6 recites "a vehicle body including an engine supported on a deformable portion of said vehicle body, wherein said engine is attached to a member for transmitting a collision load wherein said member is deformable after said portion is deformed to thereby allow said engine to be capable of backward movement together toward an occupant compartment in an event of a front-end collision."

Applicants submit that it is now clear that in one embodiment, a portion may be associated with element 5 and a member may be associated with element 10 in FIGS. 1-4. Accordingly, Applicants request withdrawal of the rejections under 35 U.S.C. § 112, second paragraph.

Rejection Under 35 U.S.C. § 103

Claims 1-2, 6-7, 10, and 14-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Canadian Patent 636,693 to Blake (hereinafter "Canadian '693") in view of Vollmer et al. (U.S. Pat. No. 4,795,189 hereinafter "Vollmer").

Claims 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Canadian '693 in view of Vollmer as applied to Claim 6, and further in view of German Patent 19711392 C1.

Claims 4-5 and 11-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Canadian '693 in view of Vollmer as applied to Claims 1 and 9, and further in view of German Published Application 1,680,095.

In rejecting the claims, the Examiner writes in part:

Canadian '693 discloses a vehicle body including a portion to be deformed at the front of the vehicle (the body portion with the headlight in Figure 1) and a separate member 12 for transmitting collision load (as functionally recited, upon a collision powerful enough to dislodge engine 11 (column 2, lines 55-60) the front supports 12 would be deformed).

Regarding claims 14-15, Canadian '693's member 12 is deformable after the deformable portion of the vehicle body with the headlight and bumper in Figure 1.

Applicants submit that Canadian '693 in view of Vollmer fall short of disclosing all the limitations of amended Claims 1 and 6.

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Canadian '693 discloses the following:

The cross brace 28 is disposed adjacent to and just rearwardly of the engine 11 and, accordingly, in the event of a front end collision or other impact which is sufficiently serious to dislodge the engine 11 from the engine support members 12 the engine engages the cross brace 28. Continued movement of the engine toward the right as viewed in Figs. 1 and 2, produces a corresponding movement of the carriage 25 to the rear of the automobile thus carrying the seat 22 to the rear and moving the driver 21 out of the path of the rearwardly moving engine 11 or the steering post 20. (Canadian '693, col.2, lines 53-65) (emphasis added).

Thus, Canadian '693 discloses that the engine transmits collision load to engage the cross brace and produce a corresponding movement of the carriage holding the seat. Engine support members 12 may deform at a collision but do not transmit the collision load to thereby move the seat, as shown in Fig. 2. Accordingly, Canadian '693 does not disclose or suggest a "member for transmitting . . . collision load" in combination with the other elements as recited in Claims 1 and 6.

In contrast, Claim 1 recites "a vehicle body including a portion to be deformed on receiving a collision load and a separate member for transmitting said collision load, said portion being formed at least in front of a vehicle room wherein the separate member is deformable after said portion is deformed to thereby allow for control over deceleration of said vehicle room on receiving said collision load" and "an engine made of a rigid body supported on said vehicle body, wherein said engine is attached to said separate member so as to be movable together backward relative to said vehicle body on receiving said collision load;

Further in contrast, Claim 6 recites "a vehicle body including an engine supported on a deformable portion of said vehicle body, wherein said engine is attached to a member for transmitting a collision load wherein said member is deformable after said portion is deformed to thereby allow said engine to be capable of backward movement together toward an occupant compartment in an event of a front-end collision."

Therefore, because Canadian '693 and Vollmer, alone or in combination, do not disclose or suggest all the limitations of Claims 1 and 6, Claims 1 and 6 are patentable over Canadian '693 in view of Vollmer.

Claims 4-5 are dependent upon Claim 1, and Claims 7-8 and 11-12 are dependent upon Claim 6, and contain additional limitations that further distinguish them from the cited references. German Patent 19711392 C1 and German Published Application 1,680,095 do not

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remedy the deficiencies of Canadian '693 and Vollmer noted above. Therefore, Claims 4-5, 7-8, and 11-12 are allowable for at least the same reasons provided above with respect to Claims 1 and 6. Claims 2, 10, and 14-15 have been canceled.

Applicants resubmit that there is no motivation to combine Canadian '693 and Vollmer.

Canadian '693 discloses the following:

The invention relates generally to a safety seat construction . . . which protects the driver and passengers against injury resulting from dislodging the vehicle engine and its steering post from their mountings in the event of an automobile accident.

It is an object of the present invention . . . to provide a safety seat for automobiles in which the passenger is protected from injuries caused by the rearward movement of the automobile engine or the steering post in the event of an accident.

A further object of the invention is to provide an automobile seat which is adapted to be moved rearwardly of the automobile in the event of a front end collision or similar impact in order to move the passengers or driver out of the path of movement of the automobile engine and the steering post in the event that the latter are dislodged from their mountings.

The foregoing and other objects are realized . . . by the provision of a seat support for the front seat of an automobile, which support is mounted for movement rearwardly of the vehicle in the event of an accident. (Blake, col.1, ll.1-42) (emphasis added).

Thus, Canadian '693 discloses a carriage structure 25 that moves a front seat rearwardly in order to protect against a rearward moving engine and steering post. Canadian '693 does not disclose or suggest the need for using cables to transmit power because direct and optimal transmission of power from engine 11 to carriage 25 is disclosed for moving the front seat backward. Applicants submit that a cable system has a greater possibility of failure in the scenario envisioned in Canadian '693 where the engine moves sufficiently backward to encroach upon the front seat space. Furthermore, Canadian '693 does not disclose or suggest the use of cables for tilting or raising a seat as such a function would not protect against a rearward moving engine and steering post.

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Applicants further submit that Vollmer discloses the following:

A cable 5 is connected to a steering column 4 provided with a steering wheel 3. . . . in case of movement (arrow 6) of the transmission 2 as a result of a collision, the cable 5 may withdraw the steering wheel 3 from a site of potential danger to the driver. (Vollmer, col.3, ll.42-47).

Preferably, the steering column 4 is at least partially corrugated to render it collapsible under certain impact conditions. (Vollmer, col.6, ll.7-9).

[C]ables 15' and 16' may be branched off from cables 15 and 16 and connected to the front seats 27 and 28 to raise or tilt them backwardly in case of a frontal collision. (Vollmer, col.6, ll.1-5).

Thus, Vollmer discloses that the steering column is removed as a potential harm to the driver. Vollmer does not otherwise disclose or suggest the need for protection against a rearward moving engine. Instead, Vollmer discloses that "[g]uide and anchoring means 17 and 18 are positioned to the left and right side of the transmission 2 and are affixed to sections of the chassis . . . which even in case of a collision are not likely to collapse or compress." (Vollmer, col.3, ll.56-60). If the engine were to come through and collapse guide and anchoring means 17 and 18, the cable system of Vollmer would fail. For these reasons, Vollmer only discloses using cables to raise or tilt the front seats. Vollmer does not disclose or suggest using cables to move the front seats backward, any structure for doing so (e.g., a slide mechanism, rails), or the need to do so because the cable system in Vollmer is for the case where there is no danger from a rearward moving engine or steering column. In fact, as shown in FIG. 2 of Vollmer, there is no room for the front seats to translate backwards because of rear seats 33 and 34.

Accordingly, there is no motivation to combine Canadian '693 with Vollmer because Canadian '693 does not disclose or suggest the need or desirability for using cables let alone cables for tilting or lifting a front seat, as taught in Vollmer, and Vollmer does not disclose or suggest the need to translate the front seat backwards for protection against a rearward moving steering column or engine.

Applicants note that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577 (Fed. Cir. 1984). The mere fact that references can be combined or modified does not render the resultant combination obvious, unless the prior art also suggests the desirability

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of the combination. In re Kotzab, 217 F.3d 1365, 1371 (Fed. Cir. 2000); MPEP § 2143.01. Hindsight should not be used to combine prior art elements to establish obviousness.

Furthermore, as noted above, even if Canadian '693 were modified to use the cables as disclosed in Vollmer, the cables would be used only to raise or tilt the front seats of Canadian '693 and not for backward translation.

Neither Canadian '693 nor Vollmer, alone or in combination, disclose or suggest "a power transmission mechanism transmitting the backward movement of said structure to said seat, to thereby move said seat backward, wherein the power transmission mechanism is a cable," as recited in Claim 1.

Similar to Claim 1, Claim 6 recites "a cable disposed between the rigid body and the occupant compartment, and affixed to the seat, so as to transmit the backward motion of the rigid body to the seat to thereby move the seat backward in the event of a front-end collision."

Furthermore, even if Canadian '693 were modified to use reversing rails or guides 20 of Vollmer wherever the cable needs to change direction, such as where cables 15' and 16' make right angles behind the seats 27, 28, a plurality of guides 20 would be required behind the seats since at least two right angles are disclosed. (Vollmer, Fig. 1).

Neither Canadian '693 nor Vollmer, alone or in combination, disclose or suggest "a guide fixed to the vehicle body, around which the cable is drawn back, one end of said cable affixed to said seat," as recited in Claims 1 and 6.

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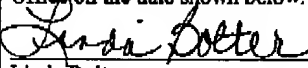
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CONCLUSION

For the above reasons, Applicants believe pending Claims 1, 4-8, and 11-12 are in condition for allowance and allowance of the Application is hereby solicited. If the Examiner has any questions or concerns or an Advisory Action is to be issued, the Examiner is hereby requested to telephone Applicant's Attorney at (949) 752-7040.

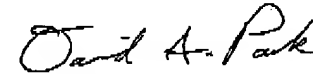
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